CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 01-031

FINAL SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDERS, NOs. 89-107, 90-122, and 98-006 FOR:

FMC CORPORATION

for the property located at

333 WEST JULIAN STREET
SAN JOSE
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Site Location**: FMC Corporation (FMC) formerly occupied and owned a manufacturing facility located at 333 West Julian Street, San Jose, Santa Clara County (Site, Figures 1 and 2). The Site is bounded by the Guadalupe River to the west, the Guadalupe Parkway to the east, the Union Pacific railway to the north, and West Julian Street to the south.

2. **Site History**: FMC and predecessor companies occupied the Site from the early 1900s through 1986. Manufacturing was first conducted at this location by the John Bean Spray Pump Company (pressurized farm and orchard sprayers) and the Anderson-Barngrover Manufacturing Company (agricultural machinery and food-processing equipment). The two companies later merged to form the Food Machinery Corporation, manufacturing and assembling agricultural and food-processing equipment, and, during two separate periods, manufacturing and assembling military tracked vehicles. In 1961, Food Machinery Corporation became simply FMC Corporation. Manufacturing at the Julian Street location ceased in 1986. FMC then leased the Site for warehousing and other storage purposes through 1997. FMC sold the Site to Sobrato Development Companies (Owner) in June 1998 and the property is being redeveloped for commercial office use.

3. **Named Dischargers**: FMC is named as a discharger based on past chemical use and activities and as property owner during the time of chemical release. The current property owner is not named as a discharger in this Order for the following reasons: the named discharger has adequate financial resources to comply with this Order, and FMC has complied with all prior Orders. However, the current property owner may be named in the future if these circumstances change.

If additional information is submitted or otherwise becomes available indicating that other parties caused or permitted any waste to be discharged on the Site or where it migrated to the Site and such waste entered or could have entered waters of the state, the Board will consider adding those parties to this order.

4. **Regulatory Status**: The Site was subject to the following Board Orders:

   - Site Cleanup Requirements for: FMC Corporation – Ground Systems Division, 333 West Julian Street, San Jose, Santa Clara County, Order No. 89-107, adopted June 21, 1989;

   - Amendment of Site Cleanup Order No. 89-107, Adoption of Final Cleanup Levels for: FMC Corporation – Ground Systems Division, 333 West Julian Street, San Jose, Santa Clara County, Order No. 90-122, adopted August 15, 1990;

   - NPDES Permit No. CA 0029840, Waste Discharge Requirements for: FMC Corporation, 333 West Julian Street, San Jose, Santa Clara County, Order No. 92-018, adopted February 19, 1992 and rescinded by Order No. 97-008, adopted on January 15, 1997;

   - By letter dated January 15, 1997, General NPDES Permit Order No. 94-087 (adopted by the Board on July 20, 1994) was incorporated for the Site and rescinded by Board letter dated January 5, 1999; and

   - Amendment of Site Cleanup Requirements Order Nos. 89-107 and 90-122, For: FMC Corporation for the property located at 333 West Julian Street, San Jose, Santa Clara County, Order No. 98-006, adopted January 21, 1998.

5. **Site Hydrogeology**: The Site and surrounding areas are underlain by unconsolidated alluvial sediments with layers and lenses of sand and gravel, separated by clay and silt sequences. Silty clay is generally encountered from the ground surface to a depth of approximately 15 to 18 feet, except adjacent to the Guadalupe river, where fill material was apparently used to build up the bank of the river. The silty clay is underlain by clayey sand, silty sand and sand to a depth of approximately 25 feet. The sand extending from 15 to 25 feet is known as the A-level aquifer. Beneath the A-level aquifer is a clay which extends from the base of the aquifer to a depth of 31 to 36 feet. Starting at a depth of 40 to 45 feet is a saturated layer of gravelly sand, sandy gravel and sand, between 1 and 19 feet in thickness, known as the B1-level aquifer. Beneath the B1-level aquifer is a clay layer separating the B1-level and B2-level aquifers. The B2-level aquifer consists of silty sand to sand, is encountered at depths of 50 to more than 90 feet, and varies in thickness from 5 to more than 15 feet.

   Prior to early 1992, A-level groundwater appeared to be moving in two separate directions beneath portions of the Site. Due to recharge from the Guadalupe River in the southwestern portion of the Site, groundwater in the southeastern portion of the Site

moved southeasterly, away from the river. Flow was also locally controlled by the active extraction trench from 1992 through January 1997. Groundwater movement beneath the north and western portions of the Site was to the west. Groundwater levels have risen since 1992 and A-level groundwater now generally flows to the west-northwest, while B1-level groundwater flows in an easterly direction.

6. **Investigation and Remediation History**: In 1986, FMC began environmental investigations of the Julian Street facility. Soil sampling in former manufacturing and product storage areas revealed the presence of petroleum hydrocarbons, volatile organic compounds (VOCs) and metals. Further investigations included the installation of groundwater monitoring wells which detected VOC groundwater impact in two shallow water-bearing zones (the A-level and B1-level) beneath the southern half of the Site.

Five remedial investigation, remedial alternative evaluation, and/or remediation implementation plan reports were submitted by FMC to the Board prior to and pursuant to provisions of Order No. 89-107:

- "Comprehensive Environmental Assessment Report, FMC Corporation, 333 Julian Street Facility, San Jose, California, January 1989";
- "Evaluation of Interim Remedial Alternatives, 333 West Julian Street Facility, San Jose, California, November 1989";
- "Remedial Investigation, FMC Corporation, 333 Julian Street Facility, January 1990";
- "Remedial Alternatives Report, FMC Corporation, 333 West Julian Street Facility, San Jose, California, April 1990" (RAR); and
- "Remediation Implementation Plan, FMC Corporation, 333 West Julian Street, January 1991".

Two additional remedial investigation and/or alternative evaluation reports were submitted by FMC to the Board pursuant to provisions of Order No. 90-122:

- "Addendum to Remedial Investigation Report, FMC Corporation, 333 West Julian Street, San Jose, California, November 1990"; and
- "Remedial Alternatives Addendum, FMC Corporation, 333 Julian Street Facility, San Jose, California, May 1991" (RAA).

Quarterly groundwater monitoring has been conducted since the third quarter of 1989.

The RAR proposed final cleanup activities and levels for the Site. On August 15, 1990, the Board adopted Order No. 90-122. Pursuant to Provision A.2.b of Order No. 90-122, FMC proposed and subsequently implemented VOC source removal in the southwest portion of the Site using soil vapor extraction (SVE). In addition, A-level groundwater cleanup was initiated pursuant to Provision A.2.d. of Order No. 90-122 using an

extraction trench system at the south and east property boundaries, with treatment of extracted groundwater by air stripping.

The SVE system was installed in the southwest portion of the Site and began operation in 1991. FMC shutdown this system on March 1, 1994 due to the very low levels of VOCs being recovered and the observation that asymptotic mass removal conditions had been reached. By letter dated September 23, 1996, Board staff provided permission to discontinue soil vapor extraction.

The groundwater extraction and treatment system for the A-level aquifer began full-time operation at the Site in March 1992. FMC reported that due to changed groundwater flow directions, limited mass removal over time and completion of effective source removal, it was no longer cost-effective to continue operation of the existing extraction system. Board staff concurred with FMC in a letter dated January 2, 1997 authorizing discontinuation of groundwater extraction and treatment. FMC shut down this system in January 1997, and has continued to conduct quarterly groundwater monitoring. Monitoring wells MW-2 and MW-6 continue to show concentrations of up to 220 parts per billion (ppb) cis-1,2 DCE and 220 ppb TCE, respectively.

A "Natural Attenuation Evaluation" report was submitted in September 2000. The report concluded that partial biodegradation of VOCs has occurred in the past, but is currently very slow or dormant. Appropriate microbial populations are present and the subsurface environment could be enhanced to accelerate the biological activity. Additional groundwater monitoring data is needed to evaluate continuing Site conditions. In a letter dated December 1, 2000, Board staff concurred with the report findings and recommended that FMC pursue an evaluation of groundwater enhancements that may accelerate the in-situ biological activities.

Order No. 90-122 adopted soil TPH cleanup levels of 100 mg/kg (or parts per million [ppm]) and soil metal cleanup levels of approximately ten times greater than Soluble Threshold Limit Concentrations (STLCs). Provisions A.3. and A.4., respectively, required submittal of a Remedial Investigation Report Addendum (November 1990) and a Remedial Alternatives Report Addendum (RAA) (May 1991). The RAA report proposed cleanup levels for lead, copper and TPH as diesel, as follows: lead - 500 ppm for 0 to 2 feet, and 1,000 ppm below 2 feet; copper - 2,500 ppm; and TPH as diesel - 100 ppm.

To address metals impacted soils, FMC submitted a "Work Plan for Construction of the Permanent Cover at 333 West Julian Street, San Jose, Santa Clara County, California" in May 1998. The Work Plan detailed installation of a permanent cover of bedding material with cellular concrete mats and revegetation consistent with the (then) proposed United States Army Corps of Engineers (COE) flood control improvement design for the Guadalupe River. Board staff approved the Work Plan in a letter dated May 29, 1998. In a letter dated January 18, 2001, Board staff revisited the necessity for the implementation of the permanent cover pursuant to Provision B.c. of Order No. 98-006 and concluded

that it is no longer necessary. Therefore, FMC is no longer required to implement the permanent cover.

7. **Flood Control Project**: The Santa Clara Valley Water District (SCVWD) (as sponsor for the COE) plans to implement a flood control project with respect to the Guadalupe River. In 1997, that plan included excavation of soils and development of the area along the South Yard adjacent to the river for recreational use. Due to concerns regarding vegetation removal along the river bank and subsequent temperature variation in the river, the COE plans have changed. The current plans include installation of two below-grade box culverts at the western portion of the Site for flood control and development of the area along the river for recreational use, as detailed in the "COE Guadalupe River Project Contract #3A (Coleman Avenue to Santa Clara Street) (Initial Design Submittal)", October 2, 2000 (COEIDS).

8. **Risk Assessment**: In May 1992, FMC submitted a report, "Building 1 - Metal Impacted Soil Health Risk Assessment, FMC Corporation, 333 West Julian Street, San Jose, California", which evaluated possible cleanup goals of 500 ppm for lead in the top two feet of soil and 4,000 ppm for lead in soils below two feet, and concluded that these levels would not present a significant adverse risk to human health or to groundwater. The report further concluded that additional cleanup for copper or TPH would not be warranted based on health risk or potential groundwater contribution.

   In September 1996, FMC submitted a report entitled "Revised Soil Remediation Goals for Metals and Total Petroleum Hydrocarbons, 333 West Julian Street, San Jose, Santa Clara County, California," based on a reconsideration of the proposed future use of the property as commercial/industrial and of the surrounding property (Guadalupe River corridor) as recreational. This report recommended revised soils remediation goals as follows: lead – 4,000 ppm; copper – 2,800 ppm; diesel and oil and grease (O&G) – 5,700 ppm. These recommended cleanup levels were based on the California Department of Toxic Substances Control "Lead Spread" Model for lead, the United States Environmental Protection Agency (USEPA) Region IX Preliminary Remediation Goals (PRGs) for copper, and protective levels developed for FMC's property at 333 West Brokaw Road in Santa Clara, Santa Clara County, California, for TPH. The USEPA Region IX PRG (USEPA, 1999) for copper in residential soils is currently 2,900 ppm.

   Several human health and groundwater protective cleanup standards for petroleum hydrocarbons were developed by FMC and approved by the Board during investigation and remediation of the nearby 333 West Brokaw Road facility in Santa Clara, California. A groundwater protective standard of 5,700 ppm of TPH as diesel assumed surrogate polynuclear aromatic hydrocarbons (PAHs) partitioning into water and subsequent consumption of that groundwater by humans. A value of 8,000 ppm of TPH as mineral oil was determined to be protective of human health for soils impacted by mineral oil, while diesel concentrations up to 20,000 ppm, based on weight percentages of indicator PAH in virgin diesel, were determined to not adversely impact water quality. Due to the sporadic nature and type of TPH encountered at the 333 West Julian Street Site, the risk assessment recommended that 5,700 ppm as diesel, and oil and grease be utilized as the

cleanup goal. With one isolated detection, all values of TPH recorded at the 333 West Julian site are below this value.

9. **Basis for Cleanup Standards**

a. **General:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

b. **Beneficial Uses:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the Site qualifies as a potential source of drinking water.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the Site:

- Municipal and domestic water supply
- Industrial process water supply
- Industrial service water supply
- Agricultural water supply
- Freshwater replenishment to surface waters

At present, there is no known use of groundwater underlying the Site for the above purposes.

The existing and potential beneficial uses of Guadalupe River include:

- Municipal and domestic supply
- Agricultural supply
- Industrial process supply or service supply
- Groundwater recharge
- Water contact and non-contact recreation
- Wildlife habitat
- Cold freshwater and warm freshwater habitat
- Fish migration and spawning
- Navigation
- Estuarine habitat
- Shellfish harvesting
- Preservation of rare and endangered species

c. **Basis for Groundwater Cleanup Standards:** The groundwater cleanup standards for the Site are based on applicable water quality objectives and are the more stringent of USEPA and California Environmental Protection Agency (CAL EPA) primary Maximum Contaminant Levels (MCLs). Cleanup to this level will result in acceptable residual risk to humans.

d. **Basis for Soil Cleanup Standards:** The soil cleanup standards for the Site are 1 mg/kg total VOCs and 10 mg/kg total SVOCs. Cleanup to this level is intended to prevent leaching of contaminants to groundwater and will result in acceptable residual risk to humans.

10. **Cleanup Plan:**

a. **Total Petroleum Hydrocarbons**: No further action is required for Site soils impacted by TPH. With one isolated exception, all soil samples analyzed for TPH were below the TPH cleanup level of 5,700 ppm. TPH has not impacted Site groundwater (A- or B1-level aquifers).

b. **Volatile Organic Compounds (VOCs) in Soils**: Soil vapor extraction at the known VOC source area has effectively remediated VOC impacts to below the cleanup standard of 1.0 ppm. No further action is required for VOCs in soils.

c. **Volatile Organic Compounds (VOCs) in Groundwater**: The A-level groundwater extraction and treatment system operated from March 1992 to January 1997, removing a total of 9 pounds of VOCs. Based on limited mass removal by groundwater pump-and-treat and completion of source area remediation by SVE, Board staff approved FMC's request to discontinue

operation of the groundwater system. Semi-annual groundwater monitoring for VOCs as described in the attached Self-Monitoring Plan is required, with a three-year review required to assess status. Final remedial measures for VOCs in groundwater will utilize enhanced bioremediation and monitored natural attenuation to meet groundwater cleanup objectives.

d. **Metals in Soils and Groundwater**: Metals have not impacted Site groundwater (A- or B1-level). Elevated lead levels in soil have been identified in historical fill areas adjacent to the Guadalupe River. There are no known areas where average (95% UCL) metals concentrations exceed the cleanup standards. However, should soils impacted above the standards be identified in the future, excavation and off-site disposal would be the appropriate remedial action.

e. **Risk Mitigation**: FMC will mitigate risks associated with residual chemicals in soil and groundwater at the Site in accordance with the February 1998 "Risk Management Plan" which requires that: 1) appropriate Site health and safety plans in compliance with Occupational Safety and Health Administration (OSHA) and California-OSHA requirements shall be prepared prior to any activities (i.e., demolition, excavation, construction) involving exposure to contamination in soil or groundwater, 2) any soil containing copper, lead, petroleum hydrocarbons and/or VOCs above specified cleanup levels encountered during demolition and redevelopment activities will be covered while on-site and properly treated or disposed, if required, 3) groundwater use from beneath the Site is prohibited through a "Covenant to Restrict Use of Property: Environmental Restriction", recorded on October 5, 1998 by the Owner, 4) potential vertical conduits between the shallow or deeper groundwater aquifers at the Site shall not be created, and 5) quarterly groundwater monitoring be performed in accordance with RWQCB Orders. The Risk Management Plan was approved by the Board in a letter dated April 2, 1998

11. **Future Changes to Cleanup Standards:** The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the Site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this site may not be possible. If full restoration of beneficial uses is not technologically nor economically achievable within a reasonable period of time, then FMC may request modification to the cleanup standards or establishment of a containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information indicates that cleanup standards can be surpassed, the Board may decide if further cleanup actions should be taken.

12. **Reuse or Disposal of Extracted Groundwater:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.

13. **Basis for 13304 Order:** FMC has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.

14. **Cost Recovery:** Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.

15. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

16. **Notification:** The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.

17. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that FMC (or the respective agents, successors, or assigns of FMC) shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.

2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. CLEANUP PLAN AND CLEANUP STANDARDS

1. **Implement Cleanup Plan**: The discharger shall implement the cleanup plan described in finding 10.

2. **Groundwater Cleanup Standards**: The following groundwater cleanup standards shall be met in groundwater monitoring wells identified in the Self-Monitoring Program.

Constituent	Standard (ug/l)	Basis
Trichloroethene (TCE)	5	CAL EPA and USEPA Primary MCL
cis-1,2-Dichloroethene (cis-1,2-DCE)	6	CAL EPA Primary MCL
trans-1,2-Dichloroethene (trans-1,2-DCE)	10	CAL EPA Primary MCL
1,1-Dichloroethene (1,1-DCE)	6	CAL EPA Primary MCL
1,1-Dichloroethane (1,1-DCA)	5	CAL EPA Primary MCL
1,2-Dichloroethane (1,2-DCA)	0.5	CAL EPA Primary MCL
1,1,1-Trichloroethane (1,1,1-TCA)	200	CAL EPA and USEPA Primary MCL
1,1,2-Trichloroethane	5	CAL EPA and USEPA Primary MCL
Vinyl Chloride	0.5	CAL EPA Primary MCL
Tetrachloroethene (PCE)	5.0	CAL EPA and USEPA Primary MCL

3. **Soil Cleanup Standards**: Soil cleanup standards are 1 ppm for total VOCs, 5,700 ppm for TPH, 4,000 ppm for lead and 2,900 ppm for copper. Remedial action will be required if the average concentration of a contaminant exceeds the cleanup standard. The average concentration is defined as the 95% UCL of the mean of a sample set.

Constituent	Standard (mg/kg or ppm)	Basis
Lead	4,000	CAL EPA "Lead Spread" risk assessment, recreational scenario
Copper	2,900	USEPA Region IX PRG, residential exposure (conservative)
Total VOCs	1.0	RWQCB staff recommendation
TPH as Diesel, Oil and Grease	5,700	Health risk based, groundwater protective

C. **TASKS**

1. **WORKPLAN FOR IMPLEMENTATION OF ENHANCED BIOREMEDIATION OF RESIDUAL VOCS IN GROUNDWATER**

COMPLIANCE DATE: May 30, 2001

Submit a workplan for the implementation of enhanced bioremediation of residual VOCs in groundwater at the Site. This shall include a monitoring program consistent with industry standards for monitored natural attenuation.

2. **IMPLEMENTATION OF ENHANCED BIOREMEDIATION OF RESIDUAL VOCS IN GROUNDWATER**

COMPLIANCE DATE: November 30, 2001

Submit an implementation report summarizing the activities undertaken to perform task 2 in accordance with the approved workplan as described in task 1.

3. **THREE-YEAR STATUS REPORT**

COMPLIANCE DATE: April 30, 2004

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the approved cleanup plan. The report should include:

a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
b. Comparison of contaminant concentration trends with cleanup standards
c. Comparison of anticipated versus actual costs of cleanup activities
d. Performance data (e.g. groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted), if relevant
e. Cost effectiveness data (e.g. cost per pound of contaminant removed), if relevant
f. Summary of additional investigations (including results) and significant modifications to remediation systems
g. Additional remedial actions proposed to meet cleanup standards (if applicable) including time schedule
h. Evaluation of the continued need for groundwater self-monitoring and, if appropriate, proposal of revisions to the groundwater monitoring program and groundwater cleanup program.

If cleanup standards have not been met and are not projected to be met within a reasonable time, the report should assess the technical practicability of meeting cleanup standards and shall propose an appropriate response acceptable to the Board.

4. PROPOSED CURTAILMENT

COMPLIANCE DATE: 60 days prior to proposed curtailment

Submit a technical report acceptable to the Executive Officer containing a proposal to curtail remediation. Curtailment includes system closure (e.g. well abandonment, final facility closure). The report should include the rationale for curtailment. Proposals for final closure should demonstrate that cleanup standards have been met, or are technically infeasible, contaminant concentrations are stable, and contaminant migration potential is minimal.

5. IMPLEMENTATION OF CURTAILMENT

COMPLIANCE DATE: 60 days after Executive Officer approval

Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task 5.

6. EVALUATION OF NEW HEALTH CRITERIA

COMPLIANCE DATE: 90 days after request by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved cleanup plan of revising one or more cleanup standards in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria relevant to contaminant conditions at the Site.

7. EVALUATION OF NEW TECHNICAL INFORMATION

COMPLIANCE DATE: 90 days after request by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new technical information which bears on the approved cleanup plan and cleanup standards for this site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the Remedial Alternatives Addendum (May 1991) and the Revised Soil Remediation Goals for Metals and Total Petroleum Hydrocarbons (September 1996). Such technical reports shall not be requested unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved cleanup plan or cleanup standards.

8. **Delayed Compliance:** If FMC is delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the particular party shall promptly notify the Executive Officer and the Board may consider revision to this Order.

D. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).

2. **Good O&M:** FMC shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.

3. **Cost Recovery:** FMC shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by FMC over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), FMC as applicable, shall permit the Board or its authorized representative:

    a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

    b. Access to copy any records required to be kept under the requirements of this Order.

    c. Inspection of any monitoring or remediation facilities installed in response to this Order.

    d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by FMC.

5. **Self-Monitoring Program:** FMC shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.

6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.

7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).

8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:

   a. Santa Clara Valley Water District (Tom Mohr)
   b. City of San Jose Fire Department (Richard Bryson)
   c. Santa Clara County Health Department (Lee Esquibel)
   d. California EPA- Department of Toxic Substances Control (Barbara Cook)

   The Executive Officer may modify this distribution list as needed.

9. **Reporting of Changed Owner or Operator:** FMC shall file a technical report on any changes in Site occupancy or ownership associated with the property described in this Order.

10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, FMC as applicable, shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

    A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

    This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

11. **Rescission of Existing Orders:** This Order supersedes and rescinds Site Cleanup Requirements Orders Nos. 89-107, 90-122, and 98-006.

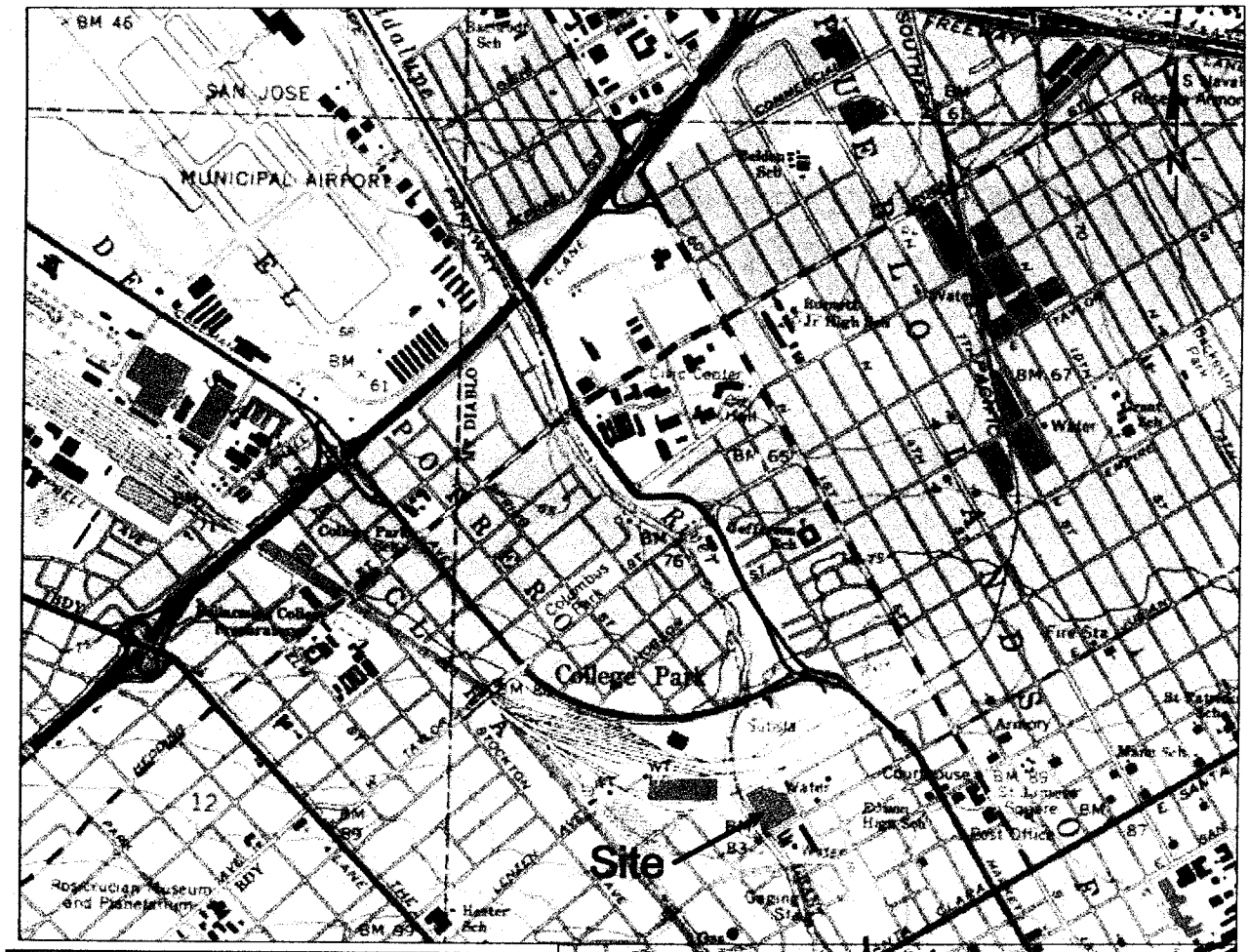
12. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary. FMC, as applicable, may request revisions or rescission and, upon review, the Executive Officer may recommend that the Board revise these requirements.

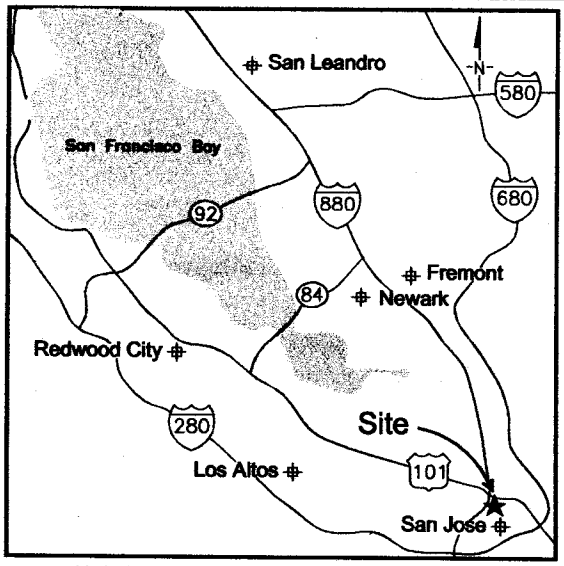
I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 21, 2001.

Loretta K. Barsamian
Executive Officer

FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

Attachments: Site Location Map (Figure 1)
Site Features (Figure 2)
Self-Monitoring Program





Not to Scale

Source: U.S.G.S. 7.5' Quadrangle, San Jose West, California

SCALE 1:24 000

0 500
METERS

0 0.5
MILES

0 1000 2000
FEET

TITLE: **Vicinity Map**

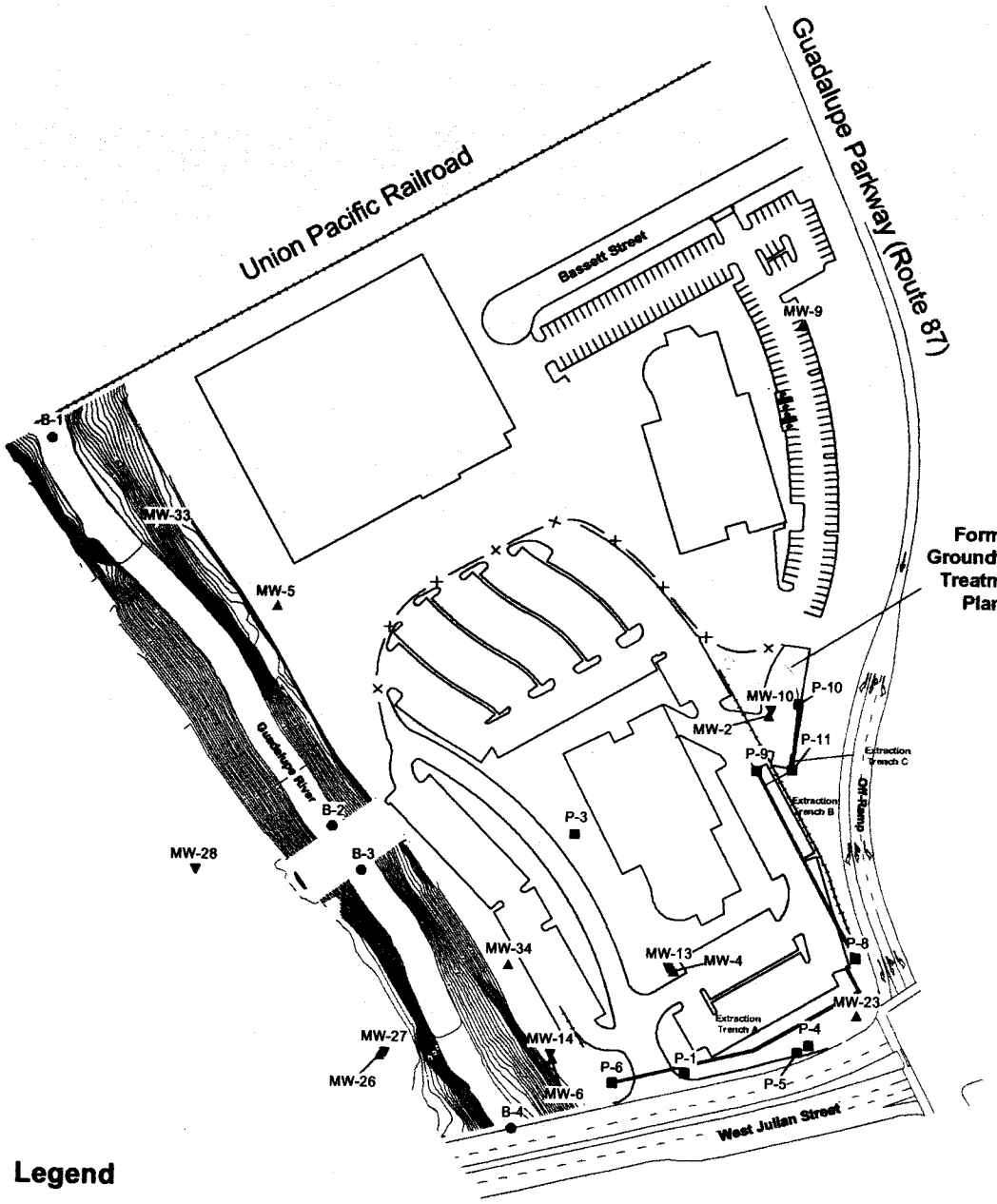
LOCATION: FMC Corporation – 333 West Julian Street

GeoTrans, Inc.

CHECKED:	MH
DRAFTED:	GHP
DATE:	01-10-01

FIGURE: 1

PROJECTS\FMC\P467A\2000\4th Qtr\Site Location.dwg



Legend

- ▲ A Level Aquifer Monitoring Well
- ▼ B1 Level Aquifer Monitoring Well
- ■ Piezometer
- ● River Measuring Location
- —— Former Groundwater Extraction Trench

N

0' 200' 400'

SCALE: 1" =200'

TITLE	Site Features
LOCATION	FMC Corporation - 333 West Julian Street

GeoTrans, Inc.

CHECKED BY	DB
DRAFTED BY	GHP
FILE NAME	P467-104
DATE	January 22, 2001

FIGURE: 2

p:\SITEGIS\JULIAN\WORKSITE A.WOR

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

FMC CORPORATION AND SOBRATO DEVELOPMENT COMPANIES

for the property located at

333 WEST JULIAN STREET
SAN JOSE
SANTA CLARA COUNTY

1. **Authority and Purpose**: The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. 01-031 (Final Site Cleanup Requirements).

2. **Monitoring**: FMC Corporation (FMC) shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following table:

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
MW-2	SA	8260	MW-13	SA	8260
MW-4	SA	8260	MW-14	SA	8260
MW-6	SA	8260	MW-23	SA	8260
MW-9	SA	8260	MW-34	SA	8260
MW-10	SA	8260			

Key: SA = Semi-Annually
8260 = EPA Method 8260 or equivalent

FMC shall sample any new monitoring or extraction wells semi-annually and analyze groundwater samples for the same methods as shown in the above table. FMC may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Monitoring Reports**: FMC shall submit semi-annual monitoring reports to the Board no later than 30 days following the end of the period (e.g. report for the first semi-annual period of the year due July 31). The first semi-annual monitoring report shall be due on July 31, 2001. The reports shall include:

   a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by FMC's principal executive officer's duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

   d. Groundwater Elevations: Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the annual report.

   e. Groundwater Analyses: Groundwater sampling data shall be presented in tabular form. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the annual report. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).

   f. Groundwater Extraction: If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the Site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the period. Historical mass removal results shall be included in the annual report each year.

   g. Status Report: The semi-annual report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) and work planned for the following period.

4. **Violation Reports**: If FMC, as applicable, violates requirements in the Site Cleanup Requirements, then the particular party shall notify the Board office by telephone as soon as practicable once the party has knowledge of the violation. Board staff may, depending on violation severity, require the party to submit a separate technical report in writing on the violation within five working days of telephone notification.

5. **Other Reports**: FMC, as applicable, shall notify the Board in writing prior to any Site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for Site investigation.

6. **Record Keeping**: FMC or its agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.

7. **SMP Revisions**: Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of FMC. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Loretta K. Barsamian, Executive officer, hereby certify that this Self-Monitoring Program was adopted by the Board on March 21, 2001.

Loretta K. Barsamian

Loretta K. Barsamian
Executive Officer